

ABSTRACT OF THE DISCLOSURE

A plasma reactor sub-assembly includes both an electrostatic shield and a process tube. Optionally, the electrostatic shield and the process tube are connected.

Alternatively, they are configured to fit together without being physically connected. The sub-assembly may be manufactured using a process tube nested within the circumference of an electrostatic shield, an electrostatic shield patterned directly on a process tube using, for example, thin film deposition, or a process tube bonded or not bonded to an electrostatic shield made of a flexible, electrical film material.